

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-20 (Canceled).

Claim 21 (Currently Amended): A rotation member applied to and rotating in a housing, the rotation member comprising:

[[an]] engaging ~~portion~~ portions formed on a cylindrical side surface around a circumference of the rotation member, the engaging portions being rotatably supported by the housing and rotating relative to the housing; and

a coating covering the engaging portion and including one or more wear-resistant materials selected from the group consisting of Si, cubic BN, TiC, WC, SiC, Cr₃C₂, ZrO₂-Y and TiB, the coating being deposited from a tool electrode including the wear-resistant materials by processing the engaging portion as a workpiece with electric spark machining.

Claim 22 (Currently Amended): The rotation member of claim 21, wherein the coating includes one or more solid lubricants selected from the group consisting of hexagonal BN, ~~MoS₂~~ Cr₂O₃, WS₂ and BaZrO₄.

Claim 23 (Currently Amended): The rotation member of claim 21, wherein the coating consists essentially of one or more wear-resistant materials selected from the group consisting of Si, cubic BN, TiC, WC, SiC, Cr₃C₂, ZrO₂-Y and TiB and one or more solid lubricants selected from the group consisting of hexagonal BN, ~~MoS₂~~ Cr₂O₃, WS₂ and BaZrO₄.

Claim 24 (Previously Presented): The rotation member of claim 21, wherein the electric spark machining is carried out with rotating the rotation member.

Claim 25 (Previously Presented): The rotation member of claim 21, wherein the engaging portion includes a groove configured to pool a lubrication liquid.

Claim 26 (Currently Amended): A housing for rotatably supporting a rotation member, the housing comprising:

the rotation member;

a supporting portion configured to rotatably support the rotation member, the rotation member rotating relative to the housing; and

a coating covering ~~[[the]]~~ a bearing of the supporting portion into which the rotation member is inserted, ~~the coating~~ [[and]] including one or more wear-resistant materials selected from the group consisting of Si, cubic BN, TiC, WC, SiC, Cr₃C₂, ZrO₂-Y and TiB, the coating being deposited from a tool electrode including the wear-resistant material by processing the bearing as a workpiece with electric spark machining.

Claim 27 (Currently Amended): The housing of claim 26, wherein the coating includes one or more solid lubricants selected from the group consisting of hexagonal BN, ~~MoS₂~~, Cr₂O₃, WS₂ and BaZrO₄.

Claim 28 (Currently Amended): The housing of claim 26, wherein the coating consists essentially of one or more wear-resistant materials selected from the group consisting of Si, cubic BN, TiC, WC, SiC, Cr₃C₂, ZrO₂-Y and TiB and one or more solid lubricants selected from the group consisting of hexagonal BN, ~~MoS₂~~, Cr₂O₃, WS₂ and BaZrO₄.

Claim 29 (Previously Presented): The housing of claim 26, wherein the bearing includes a groove configured to pool a lubrication liquid.

Claim 30 (Previously Presented): A gear box comprising of the rotation member of claim 21.

Claim 31 (Previously Presented): A gear box comprising the housing of claim 26.

Claim 32 (Previously Presented): A shaft structure of variable vanes for regulating a fluid, comprising the rotation member of claim 21.

Claim 33 (Previously Presented): A shaft structure of variable vanes for regulating a fluid, comprising the housing of claim 26.

Claims 34-38 (Canceled).

Claim 39 (Previously Presented): A shaft processed with a surface treatment by the method of claim 34.

Claim 40 (Previously Presented): A bearing processed with a surface treatment by the method of claim 34.

Claim 41 (Previously Presented): A gear box comprising the shaft of claim 39.

Claim 42 (Previously Presented): A gear box comprising the bearing of claim 40.

Claim 43 (Previously Presented): A shaft structure of variable vanes for regulating a fluid, comprising of the shaft of claim 39.

Claim 44 (Previously Presented): A shaft structure of variable vanes for regulating a fluid, comprising the bearing of claim 40.